

REMARKS

The Office Action of September 9, 2005 presents the examination of claims 3 and 86-90. Claims 3 and 89 are amended. Claims 87, 88, and 90 are canceled. No new matter is inserted into the application. Upon entry of this Reply, claims 3, 86, and 89 will be pending.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Rejection under 35 U.S.C. § 112, second paragraph (Pages 2-3 of the Office Action)

The Examiner rejects claims 3 and 86-90 under 35 U.S.C. § 112, second paragraph for allegedly being indefinite. Claims 87, 88, and 90 are canceled, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

The Examiner asserts that the phrase "the CD-ROM" is unclear. In order to overcome the rejection, but not to acquiesce to the Examiner's position, this phrase is deleted from the pending claims.

The Examiner also asserts that the phrase "said fragment" in claim 3 is unclear. In order to overcome the rejection, but not to

acquiesce to the Examiner's position, this phrase is deleted from the pending claims.

Applicants respectfully submit that the pending claims particularly point out and distinctly claim the present invention, and therefore fully comply with 35 U.S.C. § 112, second paragraph. Withdrawal of the instant rejection is respectfully requested.

Rejection under 35 U.S.C. § 101 (Pages 3-4 of the Office Action)

The Examiner rejects claims 3 and 86-90 under 35 U.S.C. § 112, second paragraph for allegedly lacking patentable utility. Claims 87, 88, and 90 are canceled, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

Specifically, the Examiner asserts that the claims are not supported by either a specific or substantial utility, or a well-established utility. Applicants respectfully disagree. The claims of the present application are, contrary to the Examiner's remarks, supported by a well-established utility. Specifically, domain analysis has shown that the claimed amino acid sequences possess two very important kinase domains: a catalytic domain located in the first part of the molecule (i.e., approximately up to residue

280 of the sequence), and a CNH domain located in the second part of the molecule.

The Examiner acknowledges that kinases have a well-established utility. Nevertheless, the Examiner asserts that there is "speculative and insufficient support" for such a utility for the inventive amino acid sequences. Applicants strongly disagree. In this regard, it is well known in the art that the CNH domain is associated with kinase activity in several proteins.

The Examiner is reminded that the burden for providing a *prima facie* case of lack of utility is on the Examiner, rather than Applicants. The Examiner merely points to several out-of-date references (e.g., published in 1994, 1997, 1996, and 2000) to assert that sequence homology cannot be used to predict function. The Examiner's position is not justifiable since the most recent publications in the art, such as Marchler-Bauer et al. (2004) "CD-Search: protein domain annotations on the fly" *Nucleic Acids Res.* 32:W327-331, clearly evidence that protein domain annotation is a reliable and predictive method for determining function.

In summary, the claimed amino acid sequences have a well-established utility based upon their sequence homology to kinases. Thus, the instant rejection is improper and should be withdrawn.

Rejection under 35 U.S.C. § 112, first paragraph (Pages 4-6 of the Office Action)

Enablement

The Examiner rejects claims 3 and 86-90 under 35 U.S.C. § 112, first paragraph for an alleged lack of enablement by the specification. Claims 87, 88, and 90 are canceled, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

The Examiner first asserts that the claims lack enablement due to the lack of either an art recognized or alleged well-established utility. Applicants respectfully disagree. As discussed in detail in the preceding section, the claimed amino acid sequences have a well-established utility based upon their sequence homology to kinases. Thus, the instant rejection is improper and should be withdrawn.

The Examiner also asserts that the claims lack enablement for homologues defined as "having sequence additions, deletions, or replaced or chemically modified amino acids in the region that differs from the 'original amino acid sequence'." In order to overcome the rejection, but not to acquiesce to the Examiner's position, these types of homologues have been deleted from the

claims. Withdrawal of the instant rejection is therefore respectfully requested.

Written Description

The Examiner rejects claims 3 and 86-90 under 35 U.S.C. § 112, first paragraph for an alleged lack of written description in the specification. Claims 87, 88, and 90 are canceled, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

Again, the Examiner asserts that the claims lack written description for homologues defined as "having sequence additions, deletions, or replaced or chemically modified amino acids in the region that differs from the 'original amino acid sequence'." In order to overcome the rejection, but not to acquiesce to the Examiner's position, these types of homologues have been deleted from the claims. Withdrawal of the instant rejection is therefore respectfully requested.

Claim Informalities (Page 6 of the Office Action)

The Examiner objects to claims 1 and 2 for lacking a proper status identifier. The listing of claims of this Reply properly

lists the status of claims 1 and 2 as "canceled." Thus, the instant objection is overcome.

Conclusion

Applicants respectfully submit that the above remarks and/or amendments fully address and overcome the outstanding rejections and objections. For the foregoing reasons, Applicants respectfully request the Examiner to withdraw all of the outstanding rejections and objections, and to issue a Notice of Allowance indicating the patentability of the present claims. Early and favorable action of the merits of the present application is thereby respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a three (3) months extension of time for filing a reply in connection with the present application, and the required fee of \$510.00 is attached hereto.

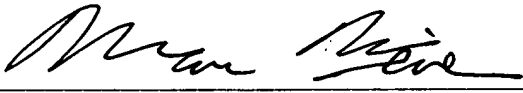
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

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overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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